ABSTRACT OF THE DISCLOSURE

The technique of the present invention carries out image processing of image data, which are to be supplied to an image display apparatus having a less number of expressible tones than a number of tones included in original image data and a non-linear display characteristic. The procedure of the present invention takes into account the non-linear display characteristic of the image display apparatus and corrects a tone value with regard to each pixel with a look-up table, so as to enhance a tone distribution corresponding to an area of wide intervals of output lightness, while reducing a tone distribution corresponding to an area of narrow intervals of the output lightness. The procedure then carries out a dispersion-type halftoning process for color reduction to convert the corrected tone values to display tone values expressible by the image display apparatus. A plurality of lookup tables is provided corresponding to a plurality of settings for a predetermined condition, such as environmental temperature, affecting the display characteristic of the image display apparatus. The selected lookup table is changeable according to a current setting of the predetermined condition. This technique of the present invention effectively improves the picture quality of resulting displayed images on the image display apparatus.